

A DICTIONARY OF THE
ECONOMIC PRODUCTS
OF THE
MALAY PENINSULA

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In two volumes, price MS.59.00

VOL. II (I-Z)

Published on behalf of the
GOVERNMENTS OF MALAYSIA and SINGAPORE
by the MINISTRY OF AGRICULTURE AND
CO-OPERATIVES, KUALA LUMPUR, MALAYSIA.

1966

1239-2444

1935

leaves. It seems that the resin rhinacanthin is the active substance. There is much potassium carbonate in the tissues.

The results obtained by applying an infusion in vinegar were very contradictory when ordinary ringworm was treated with it; but it seems that the milder dhobi's itch gives way before it.

Hedges. Sometimes the plant is used for hedges.

RHINOBATUS, Schneider. A cosmopolitan genus of sharks of the family Rhinobatidae, with one species in Malayan waters.

Sharks. *R. thonini*, Lac., is eaten by the poorer classes, but is not abundant. It is the 'yu kia-kia' or 'yu kēmējan' of the Malays. [W. B.]
used as food.

RHINOCEROS, Linn. There are three Asiatic-Malaysian species of this genus: one of them is Indian, *R. unicornis*, Linn.; of the other two which are Malaysian, *R. sundaicus*, Cuv. (*R. javanicus*, Cuv.) is the 'badak gajah' and *R. sumatrensis*, Cuv., is the 'badak kērbau' of the Malays. The last is the smallest of the three. The African rhinoceros is *R. bicornis*, Linn.

Its names. The Siamese call the rhinoceros 'rat'; and it is interesting that in the camphor language of the Malay Peninsula it is 'sēngkrat'. It is 'arak' in Benua. The Pagan races have a variety of other names for it such as 'kawap', 'hagap', 'agap', 'hagab' and 'gab' in Semang, 'sējap' in Sakai, 'rēsēki' in Jakun, &c. (see Skeat and Blagden, Pagan Races, 2, 1906 pp. 695-6).

A beast of the size and ungainliness of the rhinoceros is always interesting; and it is on record that during the time of the Caesars one was brought alive to Rome for the entertainment of the people.

Decreasing abundance. At that time there was a trade in rhinoceros' horns and hides up the Red Sea, Pliny mentioned it; and a little later the writer of the *Periplus*, the animal being then extremely abundant in tropical Africa and plentiful certainly in the moister parts of India.

The African rhinoceros has two horns, and so also has *R. sumatrensis*, which ranges from Assam to western Malaysia. The common Indian *R. unicornis* and *R. sundaicus* have only one horn. The latter sometimes has none; it ranges from Bengal to Borneo, and is a rare animal in Malaya. The horns of *R. sumatrensis* may rival in size the large horns obtainable in Africa—a length of 32 inches over the curve having been recorded. It was possible therefore for equally big horns to reach the Roman Empire from the East as from Africa.

Horn cups. Cups made of rhinoceros horn were in demand, and the word rhinoceros which meant the horn before it became the name of the animal, was actually used for the cup itself. Magic powers were attributed to the cups, namely, that they expose the presence of poison by turning colour should any be placed in them. It must have been very profitable to carry the horns to Europe; and, at some unrecorded date, it was profitable also to carry them to China.

It is probable that the majority of the horns that reached the Roman Empire at the time of Christ were of African origin; but, after

the time of Christ, the horns of *R. indicus* probably appeared and subsequently again those of *R. sumatrensis*; but the last became absorbed, chiefly, by the China markets. It may be suggested that the trade to China from Malaysia was a rather late development, for Laufer (*Sino-iranica*, 1919 p. 473) observes that in the *Yu-yan-tsu-tsu*, which was written about A.D. 860, rhinoceros horn was called by a Chinese word appearing to come from the Malayan 'hitam' (meaning black); ivory and rhinoceros horn being contrasted by the trade as white and black substances.

About A.D. 1200, Chau Ju-kua thought that the Arabs lived in the country from which they brought the horns to China, but he mentioned many sources which have been identified as in Tonkin, Annam, the Malay Peninsula, Java, India, and on the Zanzibar coast. Of the Malayan sources, Kedah was named and perhaps Kuantan is indicated also (see Hirth and Rockhill's ed. of 1911 pp. 67, 68, 116, and 223). The finest horns, however, seem to have been African and obtained from the Berbera coast; they were more white than black, which is interesting if the Chinese name was derived as suggested.

Groenevelt (*Verhandel. Batav. Genootsch.* 39, 1877 p. 17) states that a short sword, with the hilt made of rhinoceros horn, was sent to China from Malaysia as tribute. A Chinese account of the Japanese in 1416 states that the handle of the kris of these people was either made of gold or rhinoceros horn.

In 1537 Malacca, which had then been a Portuguese possession for a quarter of a century, had an important export trade in the horns. Garcia da Orta and Linschoten give a little information about it. In 1581 a living animal was shipped as a present to the King of Spain.

Linschoten tells how the products of the rhinoceros—horns, teeth, flesh, hoofs, blood, and the rest of the body, even the dung, were all held by the Indians in great esteem as a remedy against poison (Hist. Navig. ed. of 1610, p. 36). Subsequent writers (see Watt, *Poison antidote*, Dict.) refer to the medicinal value of the animal in less extreme terms; but this belief in the efficacy of the rhinoceros persists, so that there is in Calcutta a ready sale for rhinoceros urine which, except the dung, is the only part of the animal available. *Medicinal*.

Hubback reports that the incessant demand of the Chinese for every part of the animal, except the faeces, is leading towards its extermination in the Peninsula. Flower wrote, some years ago, 'I have been told that it is more profitable for a Malay to kill a rhinoceros and sell the remains to the Chinese, than to sell the whole animal to a European alive'; he adds, 'as an instance of how rhinoceros products are valued, I may mention that to skin this animal (one obtained in Bangkok) we had any number of eager volunteers, mostly Siamese women, who in return for the work of removing the skin only wanted to have some of the blood . . . it was an extraordinary sight—a crowd of women smeared with blood from head to foot, working away at the carcass with knives and

fingers: little children collecting the blood in coconut shells and Siamese men hanging round trying to get any of the flesh they could: it was very difficult to save the skeleton, several of the bones being snatched up and nearly carried off by the loafers'.

The Chinese seem to set a higher value on it for medicinal use than any other nation, but all the races of south-eastern Asia share their faith in it.

Bezoar stone. Most valuable of all the products of the rhinoceros is a bezoar stone. The horn is relatively common but this concretionary deposit is rare; therefore, as bezoar stones possess magic properties, these added to the supposed properties of the rhinoceros make them a drug of unmatched value, a fit material in romances as the cure for poisons.

The horn, 'chula', comes next in value. Gimlette (Malay Poisons, ed. of 1929 p. 186) mentions one prescription, as an antidote for poisoning, in which scrapings of the horn are to be swallowed. Horns and horn-scrapings seem to be stocked in Javanese shops. Water in which a horn has been soaked for twelve hours and left in the dew all night is drunk as a remedy for any sickness.

In the *Medical Book of Malayan Medicine* (Gard. Bull. 6, 1930 p. 351) fumigation by a rhinoceros tooth is recommended to heal a torn perineum.

Elephant-medicine. In Sir George Maxwell's translation of the *Mantra Gajah* (Journ. Roy. As. Soc. Straits Branch, 45, 1906 p. 36) it is said that the navel is a valuable elephant-medicine.

Food. The jungle tribes will eat the flesh, if obtainable (see Skeat and Blagden, Pagan Races, 1, 1906 p. 203).

RHINOPLAX, Gloger. A genus of Hornbills (q.v.).

Rays. **RHINOPTERA**, Kuhl. A genus of fishes—eagle-rays, of the family Myliobatidae, feeding chiefly on Molluscs. *R. adspersa*, Müller and Hanle, is called by the Malays 'pari daun'. [W. B.]

RHIZOMORPHS. Certain fungi, probably actually many, produce among the leaves on the floor of the forest, tough filamentous runners, which consist of tightly interlaced hyphae with dark-brown walls. These are rhizomorphs. The Malays call them 'akar batu' and 'urat batu'. The commonest, perhaps, are those of the fungi of the family Polyporaceae.

Orna-mental. The jungle tribes, particularly the Semang, weave bracelets, necklets, fillets for the hair, and girdles from them, and even short skirts (Evans in Journ. F.M.S. Mus. 5, 1914 pp. 67, 68, and 178; 6, 1916 p. 205; 12, 1925 p. 60; Robinson and Kloss, in the same, 5, 1914 p. 190).

Skeat and Blagden (Pagan Races, 1, 1906 p. 151) say that the black fungus girdle originated among the Semang, and point out that its use has not spread to races living out of contact with them. While the men wear it most often, their girdles possibly several yards long and the ends of the fibre left sticking out so as to form a fringe, the

clothing of the women is frequently also a girdle of rhizomorph-fibre (Schebesta, Bei den Urwaldzwerger, 1927 p. 228).

The Central Sakai of Tapah, who wear bracelets and necklets of rhizomorph-fibres, consider that they keep away evil spirits. They call them 'taleb' (Burkill and Haniff in Gard. Bull. S.S. 6, 1930 p. 273). The same belief in their potency is met with among the Besisi of Ula Langat in Selangor (Evans in Journ. F.M.S. Mus. 5, 1914 p. 78).

RHIZOMYS, Gray. This genus of Mammals of the family Muridae is made up of the various species of Bamboo-rat.

R. badius, Hodgson, is eaten by many of the Burmese hill-tribes, and *R. sumatrensis*, Gray, probably by all the Pagan races of the Malay Peninsula. Machado (Journ. Roy. As. Soc. Straits Branch, 38, 1902 p. 31) calls it the most toothsome and delicate of the Sakai foods; but he does not specify the tribe to which he was referring. Evans (Journ. F.M.S. Mus. 7, 1918 p. 197) and Schebesta (Bei den Urwaldzwerger, 1927 p. 228) have written of the rats as eaten by the Central Sakai and Semang. The Malays call them 'dëkan'.

Rats as food of more primitive tribes.

RHIZOPHORA, Linn. A genus of a few species of the family Rhizophoraceae; three of them, confined to the shores of the Atlantic, make the chief part of the American mangrove belts; while the other two occur in the Asiatic mangrove belts. The latter do not occur on the exposed sea-face, though several botanists of repute have said that they do; but are found well behind the Avicennias, which are the pioneers of the forests as they extend into the sea. They are, however, the most important of the trees of the belt, making, in Malaya, 70 to 90 per cent, of the stock. Though they are low and crooked when they occur isolated, they are straight when growing in a closed forest, standing with cylindrical boles and compact ellipsoid crowns, raised commonly about 60 feet from the ground. Exceptional trees are sometimes 100 feet high.

Mangroves

The two species of Malaya are easy to distinguish, after a little experience; and have different Malay names; but in uses they are so similar that as far as possible their economic characters will be set out in a single account, since to deal with them separately in all aspects would involve much repetition. J. G. Watson's report on the Malayan mangrove forests (Mal. For. Rec. 6, 1928) is excellent and should be consulted for additional information about the trees.

Similarity of the two Malayan species.

The mangrove forests of the western side of the Peninsula are of considerable value and are worked carefully: the east coast has little mangrove forest. The trees are most used as sources of firewood; but their tanning value is great and was recognized when as yet very little firewood was taken from them. Probably the Malay fishermen have used them from very remote times. The Arabs on the Arabian coast recorded at least as far back as A.D. 1230, that mangrove bark would tan. European interest was quickened by the use of the bark

Sources of firewood and tannin. European interest in tannin aroused.